

REMARKS

Claims 47-58 and new claims 74-80 are pending. Claims 59-73, drawn to a non-elected invention, have been canceled without prejudice or disclaimer. Applicant confirms its previous telephone election of claims 47-58 for prosecution on the merits. Applicant expressly reserves the right to pursue the non-elected claims in a divisional application pursuant to 35 U.S.C. § 120. By the foregoing amendment, the specification has been amended to reflect that parent application 09/453,457 has issued as U.S. Patent 6,576,309. Claim 47 has been amended to clarify that the recited weight percentages are based on the total weight of the polymeric composition. Claim 54 has been amended to clarify that the bulk polymer is heat set. New claims are directed to a process of preparing a dimensionally stable, thermally crystalline polyester article using a composition comprising polyethylene terephthalate having an intrinsic viscosity of less than 0.95 (or lower). Support for the amendments and new claims is found in the specification, *inter alia*, at page 8, lines 27-28; page 14, lines 28-31; page 17, lines 20-24; and page 29, lines 11-14. No new matter is added.

Claims 47-58 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the invention. By the foregoing amendment, claim 47 has been amended to clarify that the recited weight percentages are based on the total weight of the composition, and dependent claim 54 has been amended to clarify that the bulk polymer is heat set.

The Office Action asserts that a heat set polymer is “cured” and cannot have a final intrinsic viscosity which is at least 70% of the initial intrinsic viscosity. The Office Action’s

position is not understood. As an initial matter, the bulk polymers described in the subject application are thermoplastic are not unsaturated polyesters which are cured in so-called “bulk molding” processes. In any event, intrinsic viscosity (I.V.) is defined as the limit of the fraction $\ln(v)/C$ as C (the concentration of a polymer solution) approaches 0, wherein v is the relative viscosity which is measured at several different concentrations in a 60/40 mixed solvent of phenol and tetrachloroethane at 30 °C (specification, page 9, lines 14-17). Therefore, a solid polymer, such as a heat set thermoplastic polyester, has an intrinsic viscosity which can be determined in this manner. Applicant respectfully submits that amended claims 47-58 are properly definite. Reconsideration and withdrawal of this ground of rejection are respectfully requested.

Claims 47-58 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cheung et al., U.S. Patent 4,981,631 (“Cheung”) in view of Nelsen et al., EP 838,501 A2 (“Nelsen”). This rejection is respectfully traversed.

Cheung is cited as describing a process of thermoforming a polyethylene terephthalate-containing composition into food containers, such as dual-ovenable food trays. The Office Action concedes that Cheung does not describe using a polymeric composition containing the particular additive and compatibilizer/emulsifier/surfactant (CES) components as recited in independent claim 47.

Nelsen describes a modified polyester composition said to have improved impact resistance, which is useful in preparing automobile panels, automobile parts, industrial plumbing, and construction parts (page 6, lines 4-5). The modifier includes an ethylene acrylate co-

polymer or an ethylene alkyl methacrylate co-polymer and a ter-polymer selected from ethylene/alkyl acrylate/glycidyl methacrylate, ethylene/alkyl acrylate/glycidyl acrylate; ethylene/alkyl methacrylate/glycidyl acrylate, and ethylene/alkyl methacrylate/glycidyl methacrylate (page 2, lines 39-44). The composition is extruded and pelletized, and parts are formed by injection molding the pelletized extrudate (page 6, lines 33-34).

The Office Action asserts that it would have been obvious to incorporate the components of the Nelsen composition into the Cheung composition in order to form a food tray having high impact resistance. Applicant respectfully disagrees that it would have been obvious to combine Cheung and Nelsen in the manner proposed in the Office Action.

Nelsen is directed to molding articles such as automotive or electrical parts, in contrast to food trays, as in the present invention. Persons skilled in the art seeking to improve the properties of a food tray simply would not have turned to the electrical or automotive arts, which have vastly different requirements than do food trays. Further, the electrical or automotive parts described in Nelsen are prepared by injection molding. This is an entirely different molding technique than thermoforming, which requires consideration of such issues as melt strength, thermal crystallization, and the like. Nelsen simply is non-analogous to the thermoforming process claimed in independent claim 47.

Moreover, the Office Action's basis for combining Nelsen and Cheung, namely to improve impact resistance, is misplaced. Cheung specifically discloses the inclusion of heat stabilizers to provide the impact strength needed for food trays (see column 5, line 55 to column 6, line 42). In particular, Cheung describes the use of minor quantities of heat stabilizers (e.g.,

0.003 to 1 wt%) to provide the “retention of physical properties, especially impact strength, ... in applications such as food trays for use in dual-ovenable applications.” (column 5, lines 60-63).

Nelsen is not directed to food trays and, therefore, does not address the impact strength needed for food trays. The Office Action provides no explanation why persons skilled in the art would have turned to an entirely different field of endeavor such as automotive or electrical parts to address an issue that is already addressed by Cheung. There simply is no motivation for the proposed combination. The Office Action instead relies on the legally impermissible hindsight gleaned from reading the subject application in combining the Cheung and Nelsen disclosures. The § 103 rejection of independent claim 47 is improper and should be withdrawn. Dependent claims 48-50 are allowable for at least the same reasons as articulated above with respect to independent 47.

Dependent claims 51-53 specify that the food tray at a thickness of about 15 to 25 mils has a Dynatup Impact toughness rating at 70°F (21°C) of at least 125 and Dynatup Impact toughness rating at -20°F (-29°C) of at least 120. As discussed in the specification, this is an unexpected property of the food trays of the present invention. The Office Action dismisses these properties as an “obvious matter of choice,” and fails to cite any evidence that the food trays in the cited art possess (or even *could* possess) these properties.

Dependent claims 54-57 specify that the final intrinsic viscosity of the bulk polymer is at least about 70% (or more) of the initial intrinsic viscosity of the polymer. The Office Action refers to Cheung describing that the bulk polymer is heat set, and asserts that the claimed intrinsic viscosity limitations would be met. However, no evidence whatsoever is cited in

support of this assertion.

Dependent claim 58 specifies a step of combining the trimmed and removed portions of the extrudate with virgin materials. The Office Action asserts, again without citing any evidence, that this step is well known in the molding arts to reduce costs. However, no teaching or evidence is cited as to how this could be accomplished when the composition contains an additive and CES as in independent claim 47, which affects the polymeric composition's properties, particularly melt strength.

The Federal Circuit has cautioned that the USPTO cannot resolve questions of facts on subjective belief and unknown authority. *In re Lee*, 61 USPQ2d 1430 (Fed. Cir. 2000) ("the [USPTO's] findings must extend to all material facts and must be documented on the record, less the 'haze of so-called expertise' acquire insulation from accountability."). To establish a *prima facie* case of obviousness, the USPTO must provide substantial evidence in support of underlying questions of fact. *In re Kotzab*, 217 F.3d 1365, 55 USPQ2d 1313 (Fed. Cir. 2000).

The Office Action has failed to provide the requisite substantial evidence needed to establish a *prima facie* case of obviousness of claims 51-58. *Kotzab*, 217 F.3d 1365, 55 USPQ2d 1313. Therefore, in addition to the reasons argued above with respect to independent claim 47, the rejection of claims 51-58 should be withdrawn for these additional reasons.

The Office Action has failed to set forth a *prima facie* case of obviousness of claims 47-58. Reconsideration and withdrawal of this ground of rejection are respectfully requested.

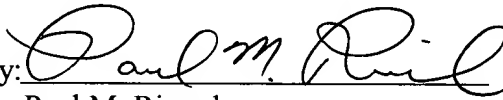
New claims 74-80 are directed to a process for preparing a dimensionally stable, thermally crystalline polyester article utilizing a polymeric composition comprising polyethylene

terephthalate having an intrinsic viscosity of less than 0.95 (or lower as specified in the dependent claims). None of the cited documents, whether taken alone or in any combination, discloses or suggests a thermoforming process utilizing the particularly claimed composition, let alone one which forms a dimensionally stable article, as set forth in independent claim 74. Applicants respectfully submit that new claims 74-80 are allowable over the prior art.

In view of the foregoing, favorable reconsideration and allowance of the subject application are earnestly solicited. The Examiner is invited to telephone the undersigned at the number listed below if doing so would be helpful to resolve any outstanding matters.

Respectfully submitted,

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